REMARKS

I. Introduction

Claims 1, 4-12 and 14-16 are pending in this application, of which claims 1, 7, 8, 12 and 16 are independent. Applicant acknowledges, with appreciation, the Examiner's allowance of claims 7, 8 and 16.

In this Amendment, claims 1 and 12 have been amended. Care has been exercised to avoid the introduction of new matter. Adequate descriptive support for the amendment can be found in, for example, Figs. 1 and 2, and Table 1 at page 14 of the specification.

II. Information Disclosure Statement

An Information Disclosure Statement was submitted on July 13, 2006. Applicant respectfully requests the Examiner to acknowledge receipt of the IDS and provide a copy of the PTO-1449 form appropriately initialed indicating consideration of the cited prior art.

III. The Rejection of Claims 1, 4, 6, 12, 14 and 15

Claims 1, 4, 6, 12, 14 and 15 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Anayama et al. In the statement of the rejection, the Examiner specifically asserted that Anayama et al. discloses that the range of a dopant is about 1×10^{17} cm^{-3} to about 4×10^{17} cm^{-3}, which teaches "a first cladding layer formed on the active layer, the first cladding layer being doped with a first impurity to have a dopant concentration higher than 4×10^{17} cm^{-3}," recited in independent claim 1.

In response, Applicant submits that Anayama et al. does not teach a semiconductor laser device including all the limitations recited in independent claim 1, as amended. Specifically, the

reference does not teach, at minimum, "a first cladding layer formed on a main surface of the active layer, the first cladding layer being doped with a first impurity to have a dopant concentration higher than 5×10^{17} cm^{-3}," and "a second cladding layer formed on a portion of a main surface of the first cladding layer, the second cladding layer being doped with a second impurity different from the first impurity," recited in claim 1.

In the claimed invention, a dopant concentration in the first cladding layer formed on a main surface of the active layer is set to be higher than 5×10^{17} cm^{-3}, which keeps the resistivity of the first cladding layer sufficiently low. Accordingly, predetermined current can be injected into the active layer without high voltage. In addition, the first cladding layer and the second cladding layer formed on the first cladding layer are different from each other in impurity, and the first cladding layer has a resistivity higher than that of the second cladding layer. Therefore, current passing through the second cladding layer into the first cladding layer does not widely expand in the first cladding layer. As a result, the current is injected into the active layer efficiently.

On the other hand, Anayama et al. teaches a semiconductor laser comprising first cladding layer 17 doped with Mg having a slant plane portion and a flat plane portion, and formed all over a surface of active layer 16. Second cladding layer 18p doped with Zn is formed all over a surface of a slant plane portion of first cladding layer 17. A dopant concentration in the first cladding layer 17 on the slant plane portion is about $1 \times 10^{17}cm^{-3}$ to $4 \times 10^{17}cm^{-3}$. It is noted that the surface of the slant plane portion of first cladding layer 17 corresponds to the main surface of the first cladding layer of claim 1.

Applicant stresses that Anayama's device is different from that of the claimed invention for the following reason. Anayama discloses that the carrier concentration in the first cladding

layer 17 on the slant plane portion is about 1 x $10^{17}cm^{-3}$ to 4 x $10^{17}cm^{-3}$. In contrast, the dopant concentration in the claimed first cladding layer is set to be higher than 5 x $10^{17}cm^{-3}$. Anayama et al. further teaches that the second cladding layer is formed all over the surface of the slant plane portion of the first cladding layer, i.e., formed all over the main surface of the first cladding layer. In contrast, the claimed second cladding layer is formed on a portion of the main surface of the first cladding layer.

Accordingly, Anayama et al. does not teach a semiconductor laser device including all the limitations recited in independent claim 1. The above discussion is applicable to claim 12 which recites a method for fabricating a semiconductor laser device. Dependent claims 4, 6, 14 and 15 are also patentably distinguishable over Anayama et al. at least because these claims respectively include all the limitations recited in independent claims 1 and 12. Applicant, therefore, respectfully solicits withdrawal of the rejection of claims 1, 4, 6, 12, 14 and 15 under 35 U.S.C. §103, and favorable consideration thereof.

IV. The Rejection of Claims 5 and 9-11

Claims 5 and 9-11 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Anayama et al. in view of Gen-Ei et al. In response, it is submitted that claims 5 and 9-11 are patentably distinguishable over the applied combination of the references at least because they include all the limitations recited in independent claim 1. For the reasons set forth above, Anayama et al. does not teach a semiconductor laser device recited in claim 1. Furthermore, Gen-Ei et al. does not teach a semiconductor laser device recited in claim 1, and therefore, does not cure any deficiencies of Anayama et al.

Accordingly, Anayama et al. and Gen-Ei et al., either in combination or individually, do not disclose or teach a semiconductor laser device including all the limitations recited in claims 5 and 9-11. Applicant, therefore, respectfully solicits withdrawal of the rejection of claims 5 and 9-11 under 35 U.S.C. §103(a), and favorable consideration thereof.

V. Conclusion

It should, therefore, be apparent that the imposed rejections have been overcome and that all pending claims are in condition for immediate allowance. Favorable consideration is, therefore, respectfully solicited.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

McDERMOTT WILL & EMERY LLP

Michael E. Fogarty
Registration No. 36,139

Please recognize our Customer No. 20277 as our correspondence address.

600 13th Street, N.W.
Washington, DC 20005-3096
Phone: 202.756.8000 MEF:TT
Facsimile: 202.756.8087
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